Method and Device for Non-Combustive Vaporization of Oud Using Propylene Glycol and Thermal Diffusion

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Abstract

This disclosure describes a method and device for producing natural oud-based vapor for room aroma purposes without combustion. The system utilizes **propylene glycol (PG)** as a soaking medium for **Agarwood (oud) chips**, which are gently vaporized using **indirect charcoal heat** and **controlled airflow**.

Technical Description

1. Aromatic Material Preparation

- Natural oud wood chips (Aquilaria spp.) are shaved or broken into thin slivers.
- The chips are soaked in **propylene glycol (PG)** for **24–48 hours** in a sealed container at room temperature.
- Optionally, additional aromatics such as **frankincense**, **benzoin**, or other resins may be included in the soak.

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2. Device Configuration

The device consists of the following main components:

1. Base Platform with Air Holes

- Holds a natural charcoal disc or block.
- Contains perforations that allow vertical airflow.

2. Bottom-Facing Fan Assembly

- A small, low-speed fan beneath the charcoal base provides gentle airflow.
- This airflow feeds oxygen to the charcoal and directs rising warm air upward.

3. Cylindrical Heat Chamber

- A heat-retaining cylindrical cover surrounds the coal to focus rising heat.
- The chamber is topped with a **perforated metal or ceramic "roof"**.

4. Diffusion Tray for Soaked Oud Chips

- PG-soaked oud chips are placed on the perforated roof above the charcoal heat source.
- Rising warm air gently heats the chips and PG solution, releasing vapor into the room.

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3. Operation

- Charcoal is ignited and placed on the perforated base.
- The fan is turned on at low speed.
- The cylindrical heat chamber is placed over the charcoal.
- The rising heat and air current pass through the oud chips, **vaporizing aroma compounds without burning them**.
- This vapor gently fills the room, offering a clean, combustion-free aroma experience.

Alternative Embodiment (Fanless Version)

This passive version excludes the fan. It relies on **natural convection** from the coal to create airflow.

- The charcoal is enclosed in the same cylindrical chamber.
- Heat naturally rises and diffuses through the perforated tray holding the oud chips.
- This results in a **slower but meditative aroma release**, ideal for traditional, low-tech use cases or rituals.

Novelty Claim

This method combines:

- A specific soaking process using **propylene glycol** to extract aromatic compounds from **natural oud wood**
- A hybrid device that combines **charcoal-based heat** and **directional airflow** to **vaporize** (not burn) the soaked wood
- A scalable, combustion-free approach for **ambient scent diffusion** using natural materials
- The first known configuration combining **PG-soaked oud chips** with **heat-enhanced aromatic vaporization**

Purpose of Disclosure

This document is being disclosed publicly to establish **prior art** for the above method and device design.
The intention is to prevent others from filing patents on this concept or system by proving **public knowledge as of the date of archive**.
It is not currently a commercial product, but may be developed into one in the future.